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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,670	08/22/2003	Masaru Shimomura	723-1421	8405

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NIXON & VANDERHYE, P.C.
1100 N. GLEBE ROAD
8TH FLOOR
ARLINGTON, VA 22201

EXAMINER	
TRAN, LONG K	

ART UNIT	PAPER NUMBER
2818	

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/645,670	SHIMOMURA ET AL.	
	Examiner	Art Unit	
	Long K. Tran	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10 - 18* is/are allowed.

6)☒ Claim(s) *1-3,6,7 and 9* is/are rejected.

7)☒ Claim(s) *4,5 and 8* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/8/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. This office acknowledges of the following items from the Applicant:

Information Disclosure Statement (IDS) filed on April 08, 2004.

The references cited on the PTO -1449 form have been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims **1 – 3** are rejected under 35 U.S.C. 102(b) as being anticipated by NakaMats (US Patent no. 6,249,998).

4. Regarding claim **1**, NakaMats discloses a swing-type display device (fig. 2) for, when swung, displaying an image in a trajectory of the swing by utilizing persistence of vision, comprising:

a linear array of first light-emitting elements 2 (fig. 2) capable of emitting light in a predetermined color (col. 3, line 49), the linear array extending in a direction substantially perpendicular to the direction of the swing (figs. 4 and 5);

a linear array of second light-emitting elements 2' (fig. 2; col. 1, lines61 and 62) capable of emitting light in a color which is different from the predetermined color (col. 3, line 49), the first light-emitting elements and the second light-emitting elements being

arranged in pairs of two, such that each second light-emitting element is disposed near a corresponding one of the first light-emitting elements (fig. 2); and

a control section C including circuits 5 and 5' (fig. 2; col. 2, lines 1 7) for activating each of the first and second light-emitting elements for a predetermined period to emit light in a luminance level in accordance with image data, thereby displaying an image corresponding to the image data in the trajectory of the swing (figs. 4 – 9; col. 2, lines 29+).

Regarding claim **2**, NakaMats discloses the predetermined periods equal to period for displaying a single pixel of the image (col. 2, lines 29+).

Regarding claim **3**, NakaMats discloses the first and second light-emitting elements of each pair are located side by side in the direction of the swing.

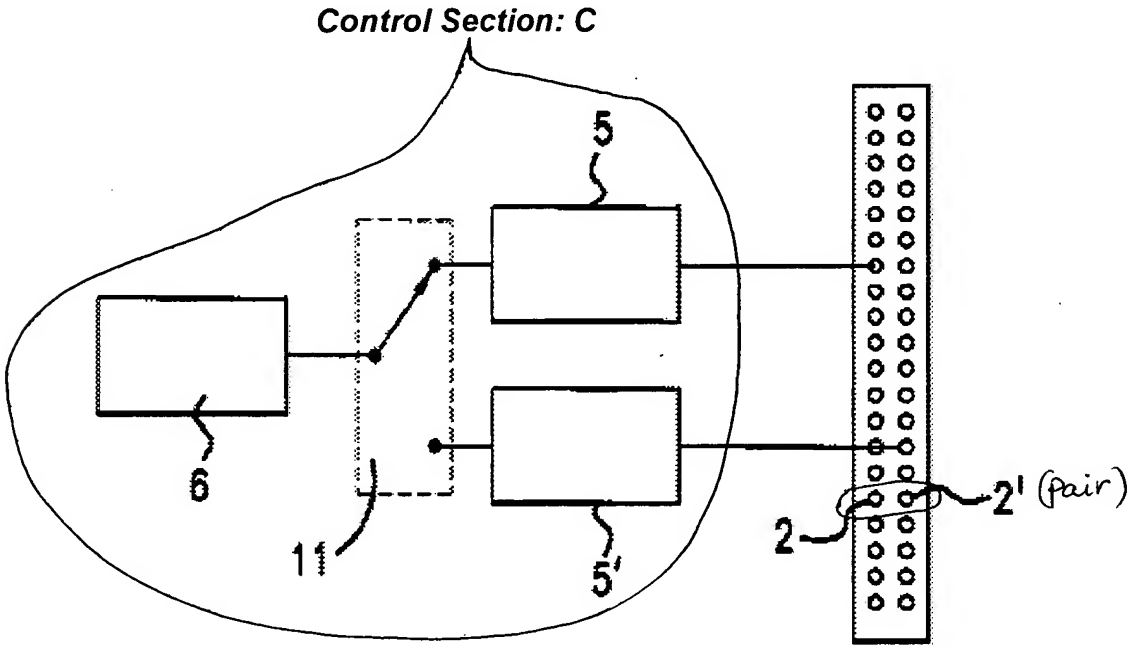

FIG.2

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over NakaMats (US Patent no. 6,249,998).

7. Regarding claim **6**, NakaMats discloses the claimed invention of claim 1.

NakaMats does not teach the control section is operable to drive the light-emitting elements by using a PWM technique. However this limitation is taken to be a product and process of use limitation, it is the patentability product and not of recited process of use steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product and process of use claim, a rejection based on sections 102 or 103 is fair. A product and process of use claim directed to the product per se, no matter how actually operated, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See In re Fessman, 180 USPQ 324,326(CCPA 1974); In re Marosi et al., 218 USPQ 289,292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the procedure steps, which must be determined in a "product by process " claim, and not the patentability of the procedure. See also MPEP 2113. Moreover, an

old or obvious product produced by a new method is not a patentable product, whether claim in "product by process" claim or not.

Regarding claim **7**, NakaMats discloses the claimed invention of claim 1.

NakaMats does not teach the control section is operable to drive the light-emitting elements with current or voltage based on the image data. However this limitation is taken to be a product and process of use limitation, it is the patentability product and not of recited process of use steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product and process of use claim, a rejection based on sections 102 or 103 is fair. A product and process of use claim directed to the product per se, no matter how actually operated, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See In re Fessman, 180 USPQ 324,326(CCPA 1974); In re Marosi et al., 218 USPQ 289,292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the procedure steps, which must be determined in a "product by process " claim, and not the patentability of the procedure. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claim in "product by process" claim or not.

Regarding claim **9**, NakaMats discloses the claimed invention of claim 1.

NakaMats does not teach the control section is operable to drive the light-emitting elements of each pair that is located more to a rear along the direction of swing –type display device to be activated a predetermined time later than the other light-

emitting element which is located more to the front along the direction of swing of the swing-type display device. However this limitation is taken to be a product and process of use limitation, it is the patentability product and not of recited process of use steps which must be established. Therefore, when the prior art discloses a product which reasonably appears to be identical with or only slightly different than the product claimed in a product and process of use claim, a rejection based on sections 102 or 103 is fair. A product and process of use claim directed to the product per se, no matter how actually operated, In re Hirao, 190 USPQ 15 at 17 (footnote 3). See In re Fessman, 180 USPQ 324,326(CCPA 1974); In re Marosi et al., 218 USPQ 289,292 (Fed. Cir. 1983); and particularly In re Thorpe, 227 USPQ 964,966 (Fed. Cir. 1985), all of which make it clear that it is the patentability of the final structure of the product "gleaned" from the procedure steps, which must be determined in a "product by process " claim, and not the patentability of the procedure. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claim in "product by process" claim or not

Allowable Subject Matter

8. Claims **4, 5** and **8** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an examiner's statement of reasons for the indication of allowable subject matter: Claims **4, 5** and **8** are allowable over the prior art of record

because none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

An optical guide includes a first face opposing the light-emitting surfaces; a second face is opposite from the first face and is mat-finished to diffuse the light propagating through the optical guide as cited in claim 4; a tilt sensor includes a ball which is capable of reciprocating between a first position and second position in synchronization with the swing of the display device as cited in claim 8.

10. Claims **10 – 18** are allowed.

11. The following is an examiner's statement of reasons for allowance: Claims **10 – 18** are allowable over the prior art of record because none of the prior art whether taken singularly or in combination, especially when these limitations are considered within the specific combination claimed, to teach:

Partitions located between adjacent ones of the light-emitting elements for restricting directions of light outputted; a plurality of convex portions formed on at least one of the first and second faces, each shaped as ridge extending along the direction of the swing as cited in claim 10; and among other limitations as cited in the independent claim 10.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long K. Tran whose telephone number is 571-272-1797. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Long Tran LKT

March 18, 2005

David Nelms
Supervisory Patent Examiner
Technology Center 2800